Lot of money
Good looks
getting success in examinations
taking decisions
getting job and money
unique and the highest attribute
gift of intelligence
nature of intelligence
capacity to understand the world
think rationally
use available resources effectively
ability to think on an abstract level
aggregate or global capacity

# **Questions:**

Q: What are the three options mentioned in the introduction?

A: Lot of money, Good looks and Intelligence.

Q: Which option would probably be chosen by the majority?

A: Intelligence.

Q: Why is intelligence considered essential?

A: It is essential for getting success in examinations, participating in various competitions, taking decisions, getting job and money.

Q: What is described as a unique and the highest attribute of human species?

A: Intelligence.

Q: What have humans achieved by using intelligence?

A: Humans have achieved new horizons of progress.

Q: What does intelligence mean according to the passage?

A: A capacity to understand the world, think rationally, and use available resources effectively when faced with challenges.

Q: How did Lewis Terman define intelligence?

A: An ability to think on an abstract level.

Q: How did David Wechsler define intelligence?

A: Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally, and to deal effectively with his environment.

single, global ability
several different abilities
unitary notion of intelligence
single entity
multiple abilities are involved
three independent abilities
Abstract intelligence
Social intelligence
Concrete intelligence
seven primary abilities
Verbal comprehension

Word fluency

Number facility

Spatial visualization

Associative memory

Perceptual speed

Reasoning

General factor (g)

Specific factor (s)

Fluid intelligence

Crystallized intelligence

neurological development

educational attainment

stock of knowledge

theory of multiple intelligence

nine independent types of intelligence

Linguistic intelligence

Logical-mathematical intelligence

Spatial intelligence

Musical intelligence

Bodily-kinaesthetic intelligence

Interpersonal intelligence

Intra-personal intelligence

Naturalistic intelligence

Existential intelligence

#### **Questions:**

Q: What are the two main perspectives on intelligence?

A: Intelligence as a single, general ability and intelligence as a set of multiple abilities.

Q: Which psychologists believed that intelligence is a single entity?

A: Alfred Binet, Lewis Terman, David Wechsler.

Q: Who came up with the notion that multiple abilities are involved in intelligence?

A: E. L. Thorndike, Louis Thurstone, Charles Spearman.

Q: What three independent abilities did E. L. Thorndike propose?

A: Abstract intelligence, Social intelligence and Concrete intelligence.

Q: How many primary abilities did Louis Thurstone propose?

A: Seven primary abilities.

Q: What are the seven primary abilities according to Louis Thurstone?

A: Verbal comprehension, Word fluency, Number facility, Spatial visualization, Associative memory, Perceptual speed and Reasoning.

Q: What statistical method did Charles Spearman use in 1927?

A: Factor analysis.

Q: What two factors of intelligence did Charles Spearman identify?

A: General factor (g) and Specific factor (s).

Q: What does the general factor represent according to Charles Spearman?

A: The minimum competence required to carry out daily work.

Q: What does the specific factor include according to Charles Spearman?

A: Abilities which are required to solve problems in specific areas.

Q: Who proposed fluid and crystallized intelligence?

A: Raymond Cattell and John Horn.

Q: What is fluid intelligence dependent on?

A: Neurological development.

Q: What is crystallized intelligence dependent on?

A: Educational attainment, acquired experiences and stock of knowledge.

Q: Who asserted the theory of multiple intelligence?

A: Howard Gardner.

Q: How many independent types of intelligence did Howard Gardner propose?

A: Nine.

Q: Name any three types of intelligence proposed by Howard Gardner.

A: Linguistic intelligence, Logical-mathematical intelligence, Spatial intelligence.

Q: What are the last three types of intelligence in Gardner's list?

A: Intra-personal intelligence, Naturalistic intelligence and Existential intelligence.

measuring variables such as head size He thought he could determine intelligence test did not prove very useful used the term 'mental test' test administration must be standardized the Binet-Simon Intelligence Scale Father of Intelligence Test logical reasoning, finding rhyming words **Stanford Binet Test** Army Alpha and Army Beta intelligence tests **Army General Classification Test** Wechsler- Bellevue Intelligence Scale Wechsler Adult Intelligence Scale (WAIS) Wechsler Intelligence Scale for Children (WISC) increasing day by day Mental Age mental development need not correspond measured mental age of various people Intelligence Quotient (I.Q.) refined the formula of I.Q.

### **Questions:**

Q: Who were among the first scientists to think about measuring intelligence?

A: Paul Broca and Sir Francis Galton.

Q: What variables did Sir Francis Galton measure in the mid 1880s?

A: Head size, reaction time, visual accuracy, auditory threshold, breathing capacity.

Q: What assumption did Galton make about skull size?

A: The larger the skull, the smarter the person.

Q: Who first used the term 'mental test' in psychological literature?

A: Raymond Cattell.

Q: What did Raymond Cattell emphasize about test administration?

A: It must be standardized so results are comparable.

Q: Why were Paris school authorities interested in intelligence testing in the 20th century?

A: To know reasons for repeated failure of certain students in examinations.

Q: What was the result of the Paris school authorities' interest?

A: The Binet-Simon Intelligence Scale.

Q: Who is considered the 'Father of Intelligence Test'?

A: Alfred Binet.

Q: What were some components of the Binet-Simon Intelligence Scale?

A: Logical reasoning, finding rhyming words and naming objects.

- Q: Who revised the Binet-Simon Scale in 1916?
- A: Lewis Terman from Stanford University.
- Q: What was the revised version of the Binet-Simon Scale called?
- A: Stanford Binet Test.
- Q: Who prepared Army Alpha and Army Beta intelligence tests in 1917?
- A: Robert Yerks with the help of his colleagues.
- Q: For what purpose were Army Alpha and Army Beta tests used?
- A: While recruiting soldiers in the army.
- Q: What intelligence test was used during the Second World War in 1939?
- A: Army General Classification Test.
- Q: Which intelligence scale did David Wechsler publish in 1939?
- A: The Wechsler-Bellevue Intelligence Scale.
- Q: What was the Wechsler-Bellevue Intelligence Scale renamed as in 1955?
- A: Wechsler Adult Intelligence Scale (WAIS).
- Q: Who released the fourth edition of WAIS in 2008?
- A: Karl Pearson.
- Q: What intelligence test did David Wechsler develop for children?
- A: Wechsler Intelligence Scale for Children (WISC).
- Q: Who introduced the concept of Mental Age?
- A: Alfred Binet.
- Q: How can mental age be defined according to the passage?
- A: The age at which individual performs successfully on all items on the test prepared for that age.
- Q: Who introduced the concept of Intelligence Quotient (I.Q.)?
- A: German psychologist William Stern in 1912.
- Q: How did William Stern compute I.Q.?
- A: As a ratio of Mental Age (M.A.) to Chronological Age (C.A.).
- Q: Who refined Stern's formula of I.Q.?
- A: Lewis Terman.
- Q: What is the refined formula of I.Q.?
- A: Intelligence Quotient (I.Q.) = ((Mental Age (M.A.) / (Chronological Age (C.A.)) X 100.

Individual tests of intelligence

Binet's Scale of Intelligence

Wechsler Scale of Intelligence

Dr. Bhatia's Performance Test of Intelligence

**Arthur Point Scale** 

Koh's Block Design

time consuming and costly

trained and skillful examiner

Group tests of intelligence

Army Alpha Test

**Army General Classification Test** 

Raven's Standard Progressive Matrices

less time consuming and economical

role of the examiner is minimal

establish rapport, obtain cooperation

Verbal tests of intelligence

respond verbally to test items

Wechsler's Adult Intelligence Scale (WAIS)

higher mental abilities

different linguistic background

culture bound

Non-verbal tests of intelligence

language is not used

Performance tests

Paper-pencil tests

Alexander's Pass-along test

Merril Palmer Block Building test

Raven's Coloured Progressive Matrices

different linguistic background, illiterate people and small children

culture free

measure higher and subtle mental abilities

#### **Ouestions:**

Q: What are intelligence tests that can be administered to a single individual at a time called?

A: Individual tests of intelligence.

Q: Name any two examples of individual tests of intelligence.

A: Binet's Scale of Intelligence and Koh's Block Design.

Q: What is one advantage of individual tests of intelligence?

A: The test administrator can establish a rapport with a client.

Q: What is one disadvantage of individual tests of intelligence?

A: Individual tests are time consuming and costly to administer.

Q: What are intelligence tests that can be administered to more than one person at a time called?

A: Group tests of intelligence.

- Q: Why were group tests of intelligence devised during the First World War?
- A: To recruit large number of soldiers in the army.
- Q: Name any two examples of group tests of intelligence.
- A: Army Alpha Test and Raven's Standard Progressive Matrices.
- Q: What is one advantage of group tests of intelligence?
- A: Group tests are less time consuming and economical.
- Q: What is one disadvantage of group tests of intelligence?
- A: The test administrator has much less opportunity to establish rapport.
- Q: What are intelligence tests that use language for measuring intelligence called?
- A: Verbal tests of intelligence.
- Q: Name any two examples of verbal tests of intelligence.
- A: Army Alpha Test and Wechsler's Adult Intelligence Scale (WAIS).
- Q: What is one advantage of verbal tests of intelligence?
- A: Verbal tests of intelligence are useful to measure higher mental abilities.
- Q: What is one disadvantage of verbal tests of intelligence?
- A: These tests cannot be given to people having different linguistic background, illiterate people and small children.
- Q: What are intelligence tests that use pictures, designs, and material objects called?
- A: Non-verbal tests of intelligence.
- Q: What are the two types of non-verbal tests?
- A: Performance tests and Paper-pencil tests.
- Q: Name any two examples of performance tests of non-verbal intelligence.
- A: Koh's Block Design Test and Alexander's Pass-along test.
- Q: Name any two examples of paper-pencil non-verbal intelligence tests.
- A: Raven's Standard Progressive Matrices and Raven's Coloured Progressive Matrices.
- Q: What is one advantage of non-verbal tests of intelligence?
- A: Non-verbal tests can be given to people having different linguistic background, illiterate people and small children.
- Q: What is one disadvantage of non-verbal tests of intelligence?
- A: Non-verbal tests of intelligence are less suitable to measure higher and subtle mental abilities.

Measurement of intelligence began applications in diverse fields educational institutes child guidance centres diagnostic clinics Effective schooling educationally backward students special instructional programs Mental health aiding diagnostic purposes therapeutic or rehabilitative programs Effective parenting intellectual capacities of their children realistic expectations Career counselling select the right educational course reducing the problems of failure Vocational counselling suitable vocation job dissatisfaction

### **Questions:**

Q: Where did the measurement of intelligence begin?

A: Measurement of intelligence began with the need of knowing individual differences.

Q: Name two fields where intelligence testing is applied today.

A: Educational institutes and child guidance centres.

Q: What do intelligence tests enable teachers to identify in effective schooling?

A: The educationally backward students.

Q: How can teachers help pupils using periodic test scores?

A: By classifying pupils into different intellectual categories and devising special instructional programs.

Q: What do intelligence tests enable clinicians to measure?

A: The intellectual levels of their clients.

Q: For what purposes are intelligence tests helpful to clinicians?

A: For diagnostic purposes, prognosis and deciding the therapeutic or rehabilitative programs.

Q: How do intelligence tests help parents?

A: By helping parents to know the intellectual capacities of their children.

Q: What do IQ scores help parents provide?

A: Relevant educational facilities and realistic expectations.

Q: How do intelligence tests help in career counselling?

A: They help students select the right educational course suitable to their intellectual capacities.

Q: What problems can intelligence tests reduce in career counselling?

A: The problems of failure, waste of time and money.

Q: What do intelligence tests help people choose in vocational counselling? A: The suitable vocation for themselves.

Q: What problem can vocational counselling reduce?

A: Job dissatisfaction.

fails to cope up relations with parents, wife and colleagues good relations with others talks rudely to his subordinates excellent communication skills ability to maintain friendly relations successful, happy and popular cognitive abilities term social intelligence multiple intelligence theory ability to get along well with others spectrum between toxic behaviour and nourishing behaviour toxic behaviors nourishing behavior high level of social intelligence good at understanding and interacting monitor their verbal and non-verbal expressions skilled at assessing the emotions resolve conflicts in social contexts successful negotiators

### **Questions**:

Q: Who was the first psychologist to propose the term social intelligence?

A: E.L. Thorndike.

Q: In which year was the term social intelligence proposed?

A: 1920.

Q: Who included 'inter personal intelligence' in the multiple intelligence theory?

A: Howard Gardner.

Q: According to Karl Albrecht, what is social intelligence?

A: The ability to get along well with others, and to get them to cooperate with oneself.

Q: What does a continued pattern of toxic behavior indicate?

A: A low level of social intelligence.

Q: What does a continued pattern of nourishing behavior indicate?

A: A high level of social intelligence.

Q: Name two examples of toxic behaviors.

A: Devaluing others and negative talking.

Q: Name two examples of nourishing behavior.

A: Respecting others and encouraging others.

Q: What are people with high social intelligence good at?

A: Understanding and interacting with other people.

- Q: What ability do people with high social intelligence have while communicating?
- A: They can monitor their verbal and non-verbal expressions.
- Q: What are people with high social intelligence skilled at assessing?
- A: The emotions, motivations, desires, and intentions of those around them.
- Q: What can people with high social intelligence resolve in social contexts?
- A: Conflicts.
- Q: What do people with high social intelligence enhance?
- A: Personal and professional relationships with others.

2.6.2: Emotional intelligence: Read the following examples: (1) Megha is always afraid of getting less marks in examinations.

Therefore, she always becomes restless and avoids going to college.

(2) Shailesh, an ordinary worker in a textile mill earns 10,000 salary per month.

Though having some financial problems, he never feels anxious, he understands the problems of others, helps needy people and lives his life happily.

By reading the examples given in the above box, you must have started thinking about the nature of emotional intelligence.

In our pursuits to be successful in a competitive world, all of us face socially, economically, occupationally or academically challenging situations.

To cope up with these challenging situations effectively, it is very important to be aware of and to manage our emotional reactions in such challenging situations.

John Mayer and Peter Salovey used the term emotional intelligence for the first time.

Daniel Goleman (1995) popularized the concept of emotional intelligence on a large scale.

Researchers like John Mayer and Peter Salovey defined Emotional Intelligence as the 'ability to perceive and monitor one's own and others emotions, to discriminate among them and to use this information to guide one's thinking and action.' They presented an ability based model of emotional intelligence and defined emotional intelligence as a set of following cognitive abilities:

- 1. Perceiving emotions: The ability to identify and interpret emotions of self and others.
- 2. Using emotions: The ability to use emotions to facilitate various cognitive activities such as thinking and problem solving, etc.
- 3. Understanding emotions: The ability to understand emotional language and comprehending relationships among various emotions.
- 4. Managing emotions: The ability to regulate emotions of self and others.

Artificial Intelligence is enabling machines

Think and learn through experience

A field of study that combines

Computer science, algorithms, languages, philosophy and psychology

An innovation created by human intelligence

Certain limitations to Artificial Intelligence

Human intelligence can take comparatively more relevant decisions

Artificial Intelligence can take decisions only on the basis of stored information

Human intelligence is superior in nature

Artificial Intelligence cannot be an option to human intelligence

Used on a large scale

Speech recognition

Natural language processing

Spam filtering from emails

Medical diagnosing

Detecting frauds in economic transactions

Weather forecasting

## **Questions**:

Q: What is Artificial Intelligence enabling machines to do?

A: To think and learn through experience.

Q: Which sciences does Artificial Intelligence combine?

A: Computer science, algorithms, languages, philosophy and psychology.

Q: What is Artificial Intelligence created by?

A: Human intelligence.

Q: What has comparatively no limitations?

A: Human intelligence.

Q: What can Artificial Intelligence take decisions on the basis of?

A: Stored information.

Q: In comparison to Artificial Intelligence, what is superior in nature?

A: Human intelligence.

Q: Why cannot Artificial Intelligence be an option to human intelligence?

A: Because human intelligence is superior in nature.

Q: Where is Artificial Intelligence used today?

A: On a large scale to perform daily routine tasks and solve critical problems.

Q: Name one example of Artificial Intelligence application.

A: Speech recognition.

Q: Which Artificial Intelligence application is used in emails?

A: Spam filtering from emails.

- Q: Which Artificial Intelligence application helps in health-related issues?
- A: Medical diagnosing.
- Q: Which Artificial Intelligence application detects frauds? A: Detecting frauds in economic transactions.
- Q: Which Artificial Intelligence application predicts weather?
- A: Weather forecasting.